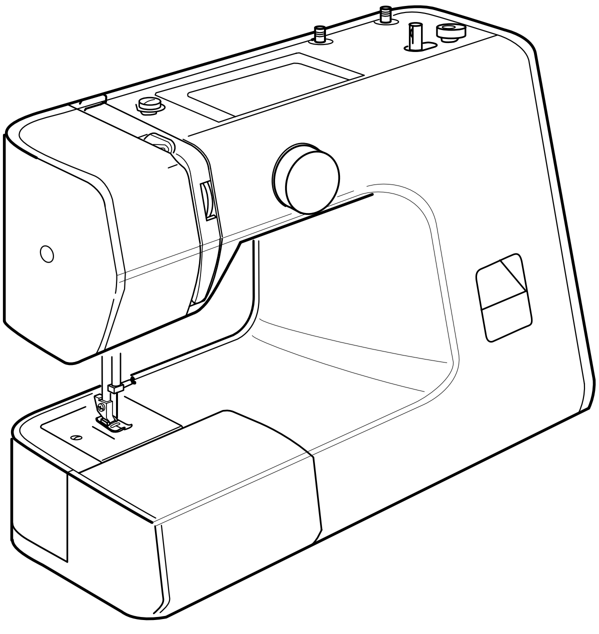
SERVICE MANUAL
AND
PARTSLIST



Next 20

CONTENTS

WHAT TO DO WHEN

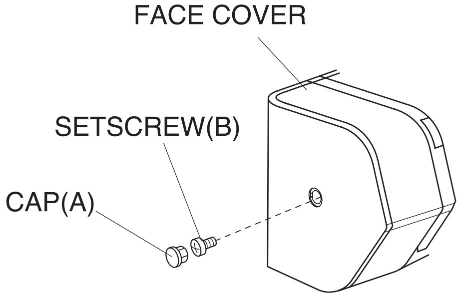
CONDITION	CAUSE	HOW TO FIX	REFERENCE
1. SKIPPING STITCHES	1. NEEDLE IS NOT INSERTED PROPERLY.	INSERT THE NEEDLE PROPERLY.	
	2. NEEDLE IS BENT OR WORN.	CHANGE THE NEEDLE.	
	3. INCORRECTLY THREADED	RETHREAD.	
	4. NEEDLE OR THREAD ARE INAPPROPRIATE FOR THE FABRIC BEING SEWN.	USE THE RECOMMENDED SEWING NEEDLE AND THREAD.	
	5. SEWING ON STRETCH FABRIC	USE A #11 BLUE TIP NEEDLE.	
	6. INAPPROPRIATE NEEDLE BAR HEIGHT	SEE MECHANICAL ADJUSTMENT "NEEDLE BAR HEIGHT."	P.16
	7. INAPPROPRIATE NEEDLE TO HOOK TIMING	SEE MECHANICAL ADJUSTMENT "NEEDLE TIMING TO SHUTTLE."	P.17
	8. INAPPROPRIATE NEEDLE TO SHUTTLE CLEARANCE	SEE MECHANICAL ADJUSTMENT "CLEARANCE BETWEEN NEEDLE AND SHUTTLE."	P.13,14
2. FABRIC NOT MOVING	1. INCORRECT FEED DOG HEIGHT	SEE MECHANICAL ADJUSTMENT "FEED DOG HEIGHT."	P.15
	2. THREAD ON BOTTOM SIDE OF FABRIC IS JAMMED UP.	MAKE SURE TO BRING BOTH NEEDLE AND BOBBIN THREADS UNDER THE FOOT WHEN START SEWING.	
	3. FEED DOG TEETH ARE WORN.	CHANGE THE FEED DOG.	

CONDITION	CAUSE	HOW TO FIX	REFERENCE
3. BREAKING UPPER THREAD	1. INITIAL SEWING SPEED IS TOO FAST.	START WITH MEDIUM SPEED.	
	2. THREAD PATH IS INCORRECT.	USE THE PROPER THREAD PATH.	
	3. NEEDLE IS BENT OR DULL.	REPLACE WITH A NEW NEEDLE.	
	4. UPPER THREAD TENSION IS TOO STRONG.	ADJUST UPPER THREAD TENSION CORRECTLY.	P.8
	5. NEEDLE SIZE IS INAPPROPRIATE FOR FABRIC.	USE APPROPRIATE NEEDLE AND THREAD FOR FABRIC IN USE.	
	6. NEEDLE EYE IS WORN.	CHANGE THE NEEDLE.	
	7. NEEDLE HOLE IN NEEDLE PLATE IS WORN OR BURRED.	REPAIR THE HOLE OR REPLACE THE NEEDLE PLATE.	
4. BREAKING BOBBIN THREAD	1. INCORRECTLY THREADED BOBBIN CASE.	THREAD BOBBIN CASE CORRECTLY.	
	2. TOO MUCH THREAD IS WOUND ON THE BOBBIN.	ADJUST THE POSITION OF STOPPER.	
	3. LINT IS STUCK INSIDE THE HOOK RACE.	CLEAN THE HOOK RACE.	
	4. THREAD QUALITY IS TOO LOW.	CHANGE TO A HIGH QUALITY SEWING THREAD.	
	5. THREAD IS JAMMING AROUND THE BOBBIN.	CLEAR OUT THE JAMMING THREAD.	
	6. BOBBIN THREAD TENSION IS TOO STRONG.	ADJUST BOBBIN THREAD TENSION CORRECTLY.	P.9
5. NEEDLE BREAKS	1. NEEDLE IS HITTING THE NEEDLE PLATE.	SEE MECHANICAL ADJUSTMENT “NEEDLE DROP.”	P.12
	2. NEEDLE IS BENT OR WORN.	CHANGE THE NEEDLE.	
	3. NEEDLE IS HITTING THE SHUTTLE RACE.	SEE MECHANICAL ADJUSTMENT “CLEARANCE BETWEEN NEEDLE AND SHUTTLE”.	P.13, 14
	4. THE FABRIC MOVES WHILE THE NEEDLE IS PIERCING IT, OR THE NEEDLE ZIGZAGS WHILE IN FABRIC.	SEE MECHANICAL ADJUSTMENT “NEEDLE SWING”.	P.11
	5. FABRIC IS BEING PULLED TOO STRONGLY WHILE SEWING.	GUIDE THE FABRIC GENTLY WHILE SEWING.	

CONDITION	CAUSE	HOW TO FIX	REFERENCE
6. NOISY OPERATION	1. BACKLASH BETWEEN SHUTTLE HOOK GEAR AND LOWER SHAFT GEAR IS TOO GREAT.	SEE MECHANICAL ADJUSTMENT “CLEARANCE BETWEEN NEEDLE AND SHUTTLE (NO.2)”.	P.14
	2. LOWER SHAFT GEAR IS LOOSE.	ELIMINATE THE LOOSENESS.	
	3. INAPPROPRIATE BELT TENSION.	SEE MECHANICAL ADJUSTMENT “MOTOR BELT TENSION”.	P.22
	4. UPPER SHAFT GEAR IS LOOSE.	ELIMINATE THE LOOSENESS.	
	5. NOT ENOUGH OIL.	OIL ALL MOVING PARTS.	
7. DEFORMATION PATTERN	1. INAPPROPRIATE ZIGZAG SYNCHRONIZATION.	SEE MECHANICAL ADJUSTMENT “NEEDLE SWING”.	P.11
	2. INAPPROPRIATE DISENGAGEMENT OF CAM FOLLOWER.	SEE MECHANICAL ADJUSTM “DISENGAGEMENT OF CAM FOLLOWER".	P.21
	3. UPPER THREAD TENSION IS TOO STRONG.	ADJUST UPPER THREAD TENSION CORRECTLY.	P.8

SERVICE ACCESS

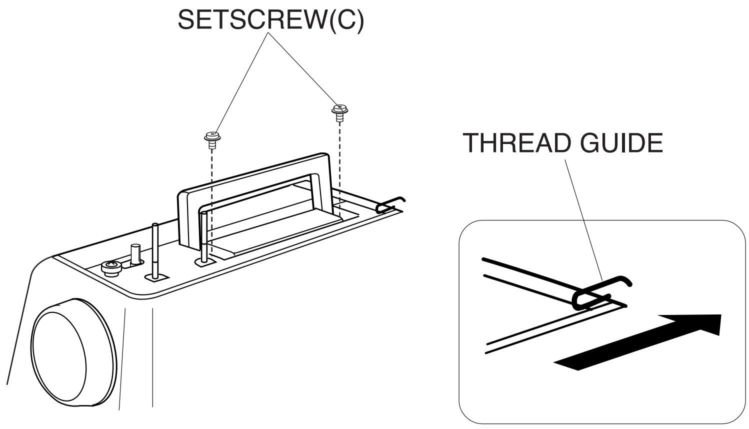
FACE COVER



TO REMOVE:
1. REMOVE THE FACE COVER BY REMOVING THE CAP (A) AND SETSCREW (B).

TO ATTACH:
2. FOLLOW THE ABOVE PROCEDURE IN REVERSE.

TOP COVER

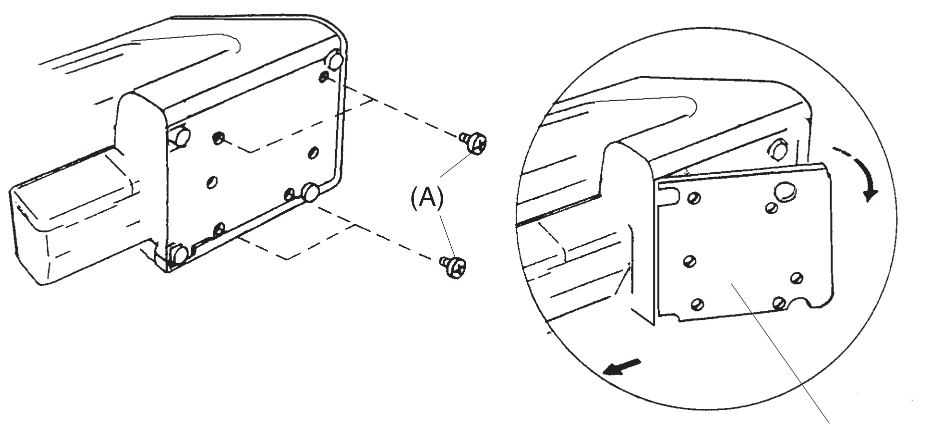


TO REMOVE:
1. REMOVE THE SETSCREWS (C).
2. SLIDE THE CORNER OF THE TOP COVER SLIGHTLY IN THE DIRECTION OF ARROW. BE CAREFUL THAT THE THREAD GUIDE SHOULD NOT INTERFEAR WITH THE TOP COVER WHEN REMOVING.
3. TAKE THE TOP COVER OUT.

TO ATTACH:
4. FOLLOW THE ABOVE PROCEDURE IN REVERSE.

SERVICE ACCESS

BASE COVER



TO REMOVE:

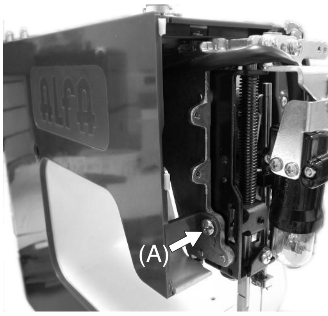
1. LOOSEN THE SETSCREWS (A).
2. REMOVE THE BASE PLATE.

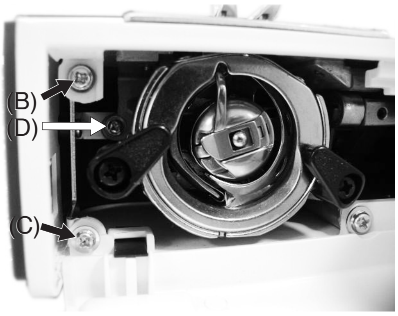
TO ATTACH:

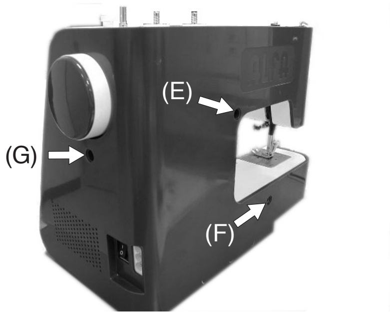
3. MOUNT THE BASE PLATE AND SECURE IT WITH SETSCREWS.

SERVICE ACCESS

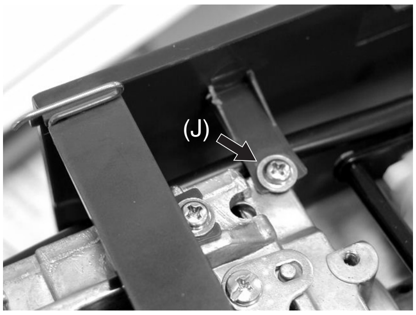
REAR COVER











TO REMOVE:

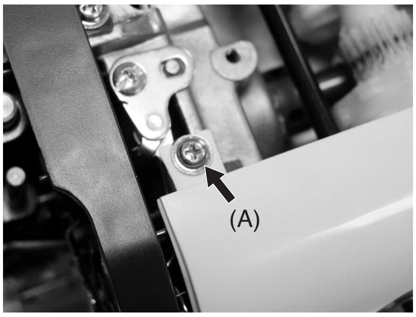
1. REMOVE THE FACE COVER AND SETSCREW (A) (SEE PAGE 4).
2. OPEN THE SHUTTLE COVER AND REMOVE THE SETSCREWS (B), (C) AND (D).
3. REMOVE THE CAPS AND SETSCREWS (E), (F), (G),
4. REMOVE THE SETSCREWS (H) AND (I).
5. OPEN THE TOP COVER (SEE PAGE 5). LOOSEN THE SETSCREW (J).
6. REMOVE THE REAR COVER.

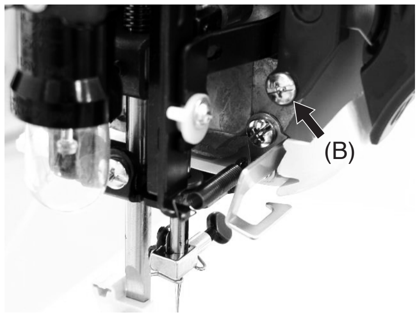
TO ATTACH:

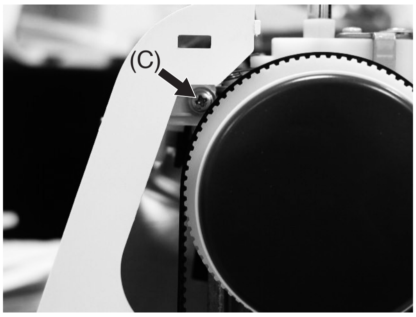
7. MOUNT THE REAR COVER IN REVERSE PROCEDURE OF THE REMOVING.

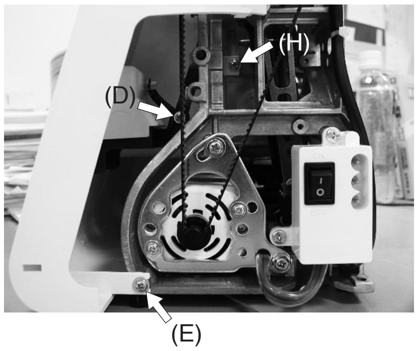
SERVICE ACCESS

FRONT COVER

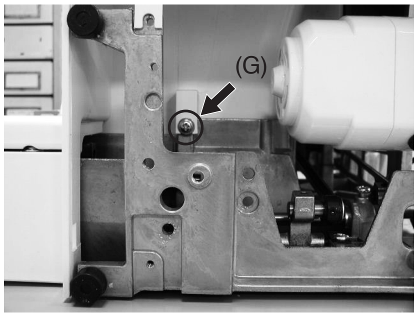












TO REMOVE:

1. REMOVE THE FACE COVER AND TOP COVER (SEE PAGE 4 AND 5).
2. LOOSEN THE SETSCREW (A).
3. REMOVE THE SETSCREW (B),
   REMOVE THE REAR COVER (SEE PAGE 6).
   LOOSEN THE SETSCREW (C), (E) AND (H). REMOVE THE SETSCREW (D).
4. OPEN THE SHUTTLE COVER. REMOVE THE SETSCREW (F).
5. REMOVE THE BASE COVER AND THE SETSCREW (G) (SEE PAGE 5).

TO ATTACH:

6. MOUNT THE FRONT COVER IN REVERSE PROCEDURE OF THE REMOVING.

MECHANICAL ADJUSTMENT

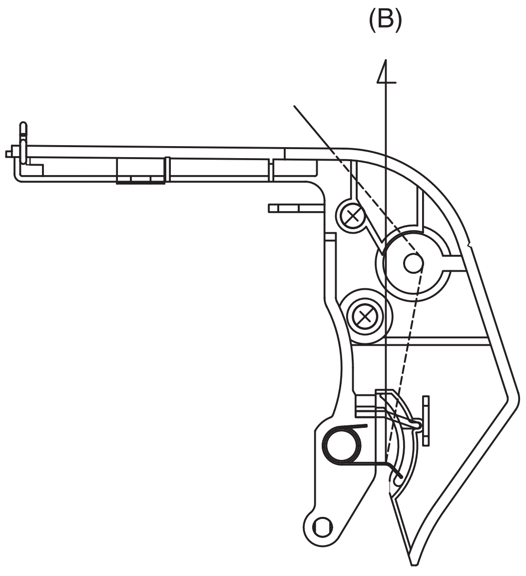
NEEDLE THREAD TENSION

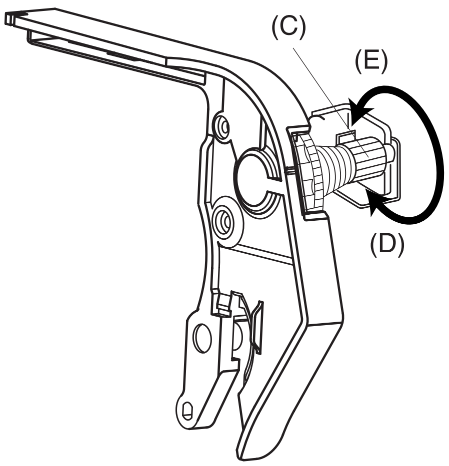
TO CHECK:

THE STANDARD UPPER THREAD TENSION SHOULD BE 65–95 g WHEN PULLING THE THREAD (COTTON THREAD #50) IN THE DIRECTION OF (B) WITH SETTING THE TENSION DIAL AT “3.” (MAKE SURE THE FOOT SHOULD BE LOWERED.)
IF THE TENSION IS OUT OF THE STANDARD RANGE, ADJUST IT AS FOLLOWS:

ADJUSTMENT PROCEDURE:

1. REMOVE THE FRONT COVER (SEE PAGE 7).
2. TURN THE ADJUSTING NUT (C) IN THE DIRECTION OF (D) WHEN THE UPPER THREAD TENSION IS TOO TIGHT.
   TURN THE ADJUSTING NUT (C) IN THE DIRECTION OF (E) WHEN THE UPPER THREAD TENSION IS TOO LOOSE.
3. ATTACH THE FRONT COVER UNIT.





MECHANICAL ADJUSTMENT

BOBBIN TENSION

TO CHECK:

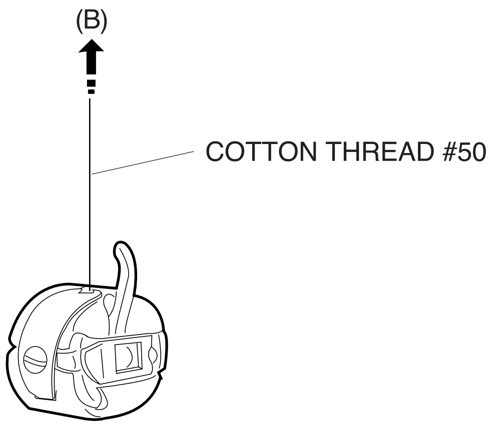
SET THE BOBBIN IN THE BOBBIN CASE AND PASS THE THREAD (COTTON #50) THROUGH THE TENSION SPRING.

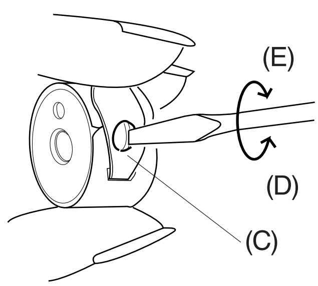
THE BOBBIN THREAD TENSION SHOULD BE 45–55g WHEN PULLING THE THREAD IN THE DIRECTION OF (B).

IF THE TENSION IS OUT OF THE RANGE, ADJUST IT AS FOLLOWS:

ADJUSTMENT PROCEDURE:

1. TURN THE ADJUSTING SCREW (C) IN THE DIRECTION OF (D) WHEN THE BOBBIN THREAD TENSION IS TOO TIGHT.
2. TURN THE ADJUSTING SCREW (C) IN THE DIRECTION OF (E) WHEN THE BOBBIN THREAD TENSION IS TOO LOOSE.





MECHANICAL ADJUSTMENT

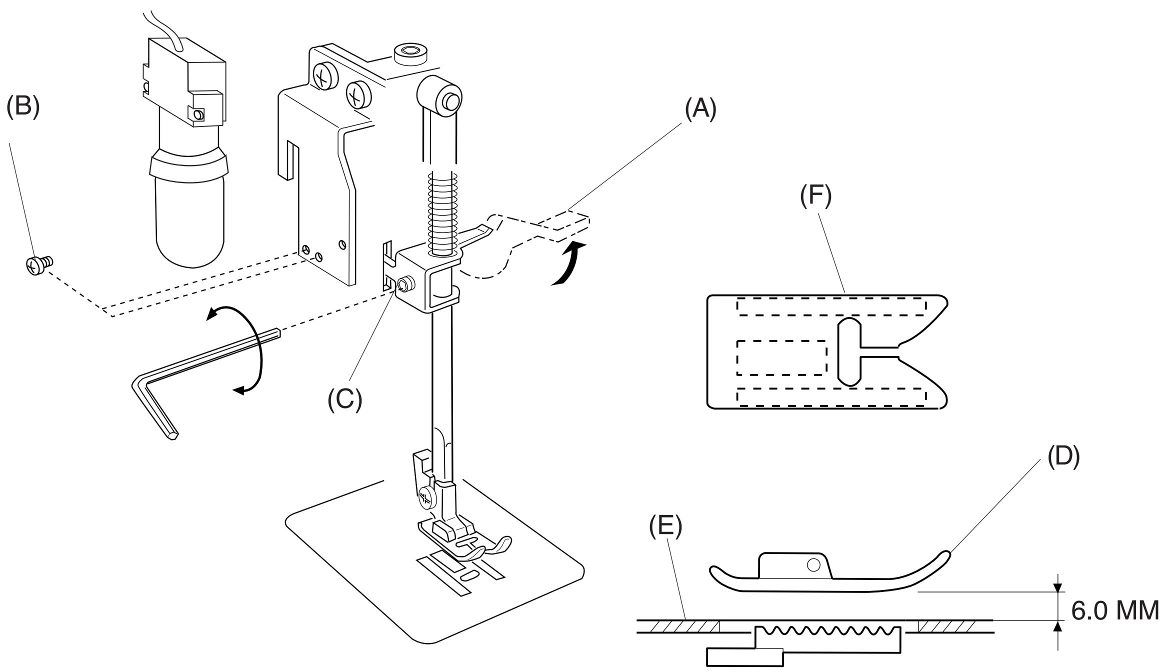
PRESSER BAR HEIGHT AND ALIGNMENT

TO CHECK:

1. RAISE THE PRESSER FOOT LIFTER (A).
2. THE DISTANCE BETWEEN THE PRESSER FOOT (D) AND THE NEEDLE PLATE (E) SHOULD BE 6.0 MM (0.24˝).

ADJUSTMENT PROCEDURE:

1. REMOVE THE FACE COVER (SEE PAGE 7).
2. REMOVE THE SETSCREWS (B) AND THE LAMP SOCKET, THEN LOOSEN THE SCREW (C) ON THE PRESSER BAR HOLDER.
   ADJUST THE DISTANCE BETWEEN THE PRESSER FOOT (D) AND THE NEEDLE PLATE (D) TO 6.0 MM (0.24˝).
3. TIGHTEN THE SCREW (C) SECURELY.
4. TIGHTEN THE SETSCREW (B) TO SECURE THE LAMP SOCKET.
5. ATTACH THE FACE COVER.
   NOTE: WHEN YOU TIGHTEN THE SCREW (C), MAKE SURE THAT BOTH SIDES OF THE PRESSER FOOT ARE PARALLEL TO THE FEED DOG SLOTS (F) IN THE NEEDLE PLATE (E).



MECHANICAL ADJUSTMENT

NEEDLE SWING

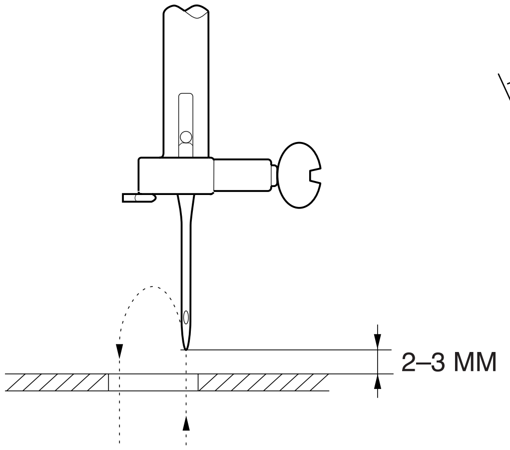
TO CHECK:

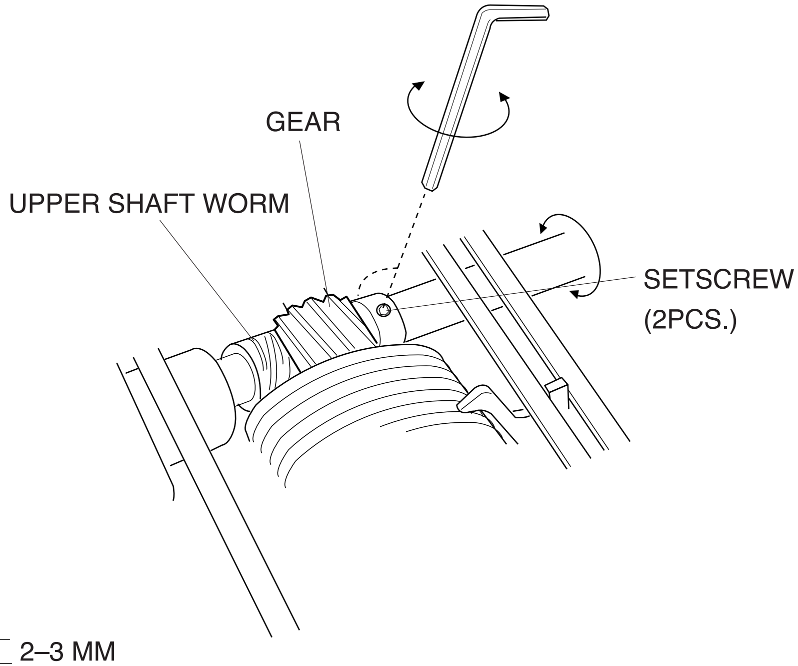
ADJUST THE NEEDLE SWING ACCORDING TO THE FOLLOWING PROCEDURE, IF THE NEEDLE BAR STARTS MOVING SIDEWAYS WHILE THE NEEDLE IS IN THE FABRIC AT SEWING THE ZIGZAG PATTERN (WITH MAXIMUM ZIGZAG WIDTH).

ADJUSTMENT PROCEDURE:

1. SET THE PATTERN SELECTOR DIAL WITH MAXIMUM ZIGZAG WIDTH, AND REMOVE THE T TOP COVER (SEE PAGE 4).
2. LOOSEN TWO SETSCREWS.
3. ADJUST THE NEEDLE SWING BY TURNING THE HANDWHEEL, WHILE HOLDING THE WORM SO AS NOT TO ROTATE IT, UNTIL THE NEEDLE SWING STARTS 2–3 MM ABOVE THE NEEDLE PLATE AFTER THE NEEDLE HAS COME OUT OF THE RIGHT SIDE OF THE NEEDLE HOLE.
4. TIGHTEN TWO SETSCREWS.
5. MOUNT THE FRONT COVER.

   NOTE: AFTER ADJUSTING THE NEEDLE SWING, CHECK THAT THE UPPER SHAFT WORM AND GEAR ROTATE SMOOTHLY WITHOUT ANY BACKLASH BETWEEN THEM.





MECHANICAL ADJUSTMENT

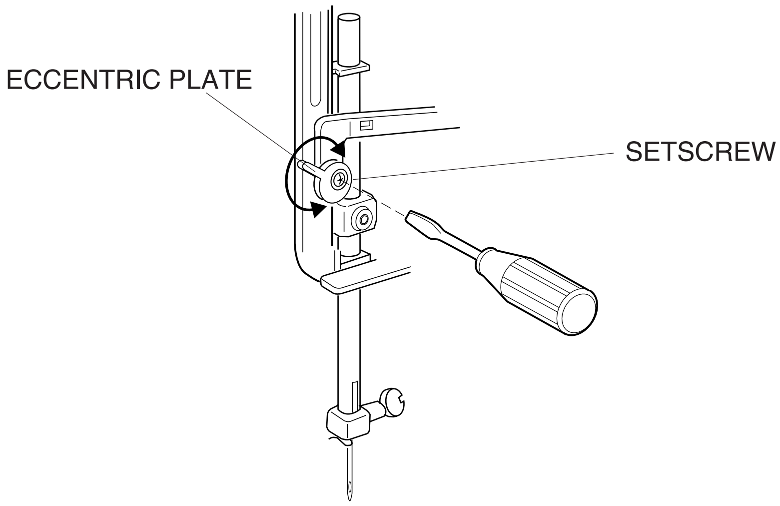
NEEDLE DROP POSITION

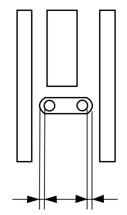
TO CHECK:

WHEN THE NEEDLE SWINGS IN MAXIMUM ZIGZAG WIDTH, THE DISTANCE BETWEEN BOTH ENDS OF THE NEEDLE HOLE IN THE NEEDLE PLATE AND THE NEEDLE DROP POSITIONS SHOULD BE EQUAL.
IF NOT, ADJUST AS FOLLOWS:

ADJUSTMENT PROCEDURE:

1. REMOVE THE FACE COVER (SEE PAGE 4).
2. SET THE PATTERN SELECTOR DIAL AT MAXIMUM ZIGZAG WIDTH.
3. LOOSEN THE SETSCREW.
4. TURN THE ECCENTRIC PLATE TO ADJUST THE NEEDLE DROP.
5. TIGHTEN THE SETSCREW.
6. ATTACH THE FACE COVER.
   NOTE: CHECK THE HOOK TIMING AFTER THIS ADJUSTMENT.





BOTH CLEARANCES SHOULD BE EQUAL

MECHANICAL ADJUSTMENT

CLEARANCE BETWEEN NEEDLE AND SHUTTLE (ADJUSTMENT METHOD NO. 1)

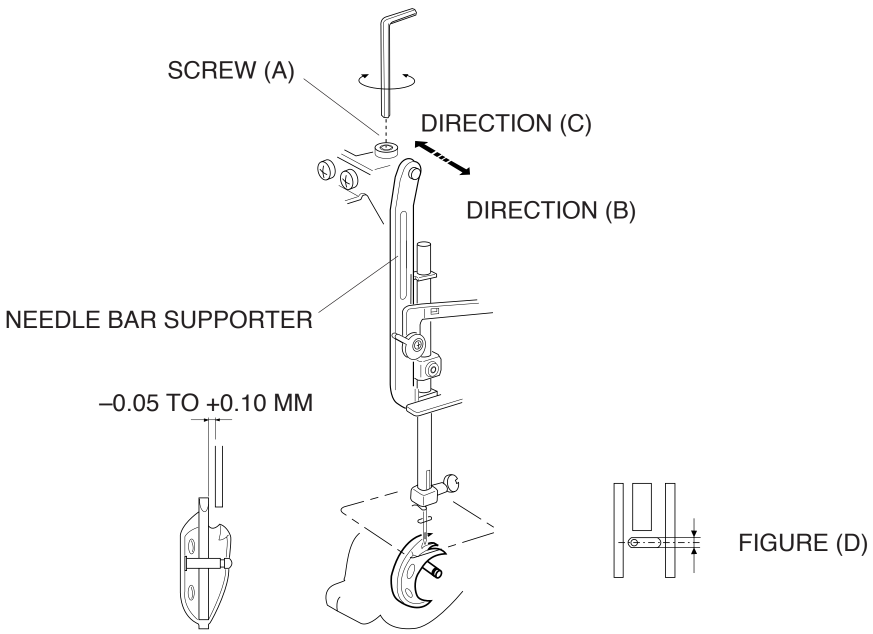
TO CHECK:

THE CLEARANCE BETWEEN THE NEEDLE AND SHUTTLE RACE SHOULD BE –0.05 TO +0.10 MM.
IF NOT, ADJUST AS FOLLOWS:

ADJUSTMENT PROCEDURE:

1. REMOVE THE FACE COVER (SEE PAGE 4).
2. SET THE PATTERN SELECTOR DIAL AT " ⊂¦⊃ ".
3. LOOSEN SCREW (A), AND MOVE THE NEEDLE BAR SUPPORTER IN THE DIRECTION OF THE ARROWS TO GET A CLEARANCE BETWEEN –0.05 TO +0.10 MM.
   * IF CLEARANCE IS TOO WIDE, MOVE THE NEEDLE BAR SUPPORTER IN THE DIRECTION (B).
   * IF CLEARANCE IS TOO NARROW, MOVE THE NEEDLE BAR SUPPORTER IN THE DIRECTION (C).

   NOTE: AFTER THIS ADJUSTMENT, CHECK THAT THE CLEARANCE BETWEEN THE NEEDLE AND NEEDLE PLATE IS 0.15 MM OR MORE AS SHOWN IN FIGURE (D).
   IF NOT, ADJUST THE CLEARANCE BETWEEN NEEDLE AND SHUTTLE RACE BY USING ADJUSTMENT METHOD NO. 2 (SEE PAGE 14).
4. ATTACH THE FACE COVER.



CLEARANCE BETWEEN NEEDLE AND NEEDLE PLATE SHOULD BE 0.15 MM OR MORE.

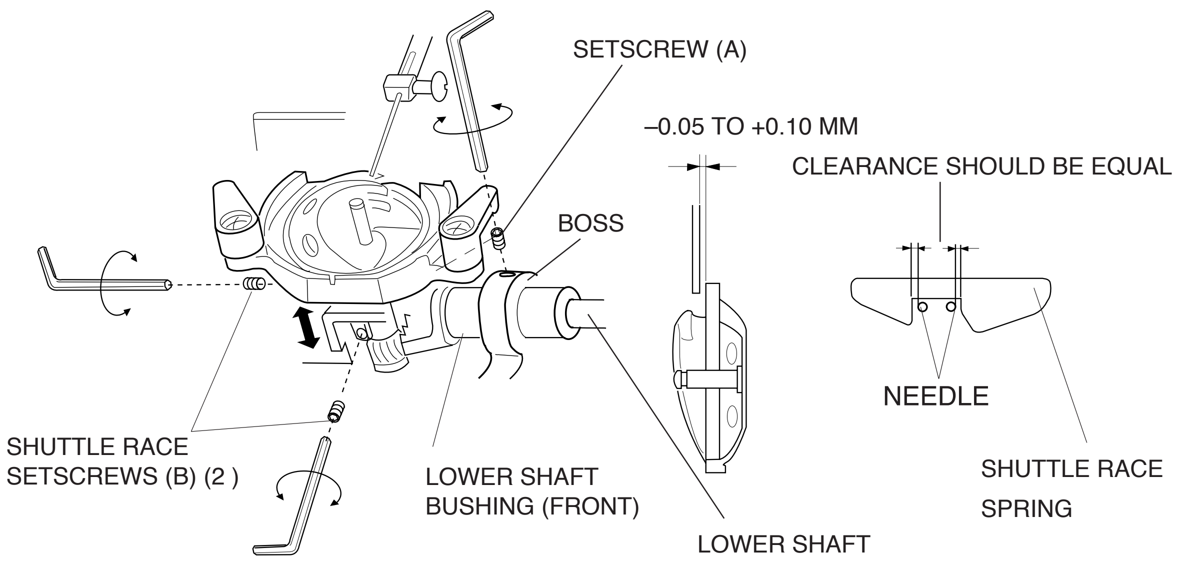
MECHANICAL ADJUSTMENT

CLEARANCE BETWEEN NEEDLE AND SHUTTLE (ADJUSTMENT METHOD NO.2)

TO CHECK:
USE THIS ADJUSTMENT METHOD NO. 2 IF THE CLEARANCE CANNOT BE ADJUSTED BY METHOD NO.1.
THE CLEARANCE BETWEEN THE NEEDLE AND SHUTTLE RACE SHOULD BE –0.05 TO +0.10 MM.

ADJUSTMENT PROCEDURE:

1. SET THE PATTERN SELECTOR DIAL AT "⊂┆⊃".
2. REMOVE THE REAR COVER (SEE PAGE 6).
3. LOOSEN THE SCREW (A) ON THE LOWER SHAFT BUSHING AND SLIDE THE GEAR ABOUT 0.5 MM TO THE RIGHT TO CREATE SOME BACKLASH BETWEEN THE GEARS.
4. LOWER THE NEEDLE AND LOOSEN THE TWO SHUTTLE RACE SETSCREWS (B). PULL UP OR PUSH DOWN THE SHUTTLE RACE TO ADJUST THE CLEARANCE BETWEEN THE NEEDLE AND THE SHUTTLE RACE IN THE RANGE OF – 0.05 TO + 0.10 MM.
5. SET THE PATTERN SELECTOR DIAL AT "⋚", TURN THE HANDWHEEL TO CHECK IF THE CLEARANCE BETWEEN THE NEEDLE AND INNER EDGES OF THE SHUTTLE RACE SPRING AT THE LEFT AND RIGHT NEEDLE DROPS ARE EQUAL.
   IF NOT, ADJUST BY TURNING THE SHUTTLE RACE UNIT.
6. TIGHTEN THE TWO SHUTTLE RACE SETSCREWS (B).
7. SLIDE THE GEAR BACK TO THE ORIGINAL POSITION WHILE ADJUSTING THE BACKLASH.
8. TIGHTEN SCREW (A) FIRMLY.
9. ATTACH THE REAR COVER.
   NOTE: THE ROTARY PLAY OF THE TIP OF THE SHUTTLE DRIVER SHOULD BE 0.3 MM OR LESS AND THE LOWER SHAFT SHOULD TURN SMOOTHLY.
   AFTER THE ADJUSTMENT, CHECK THE HOOK TIMING.



MECHANICAL ADJUSTMENT

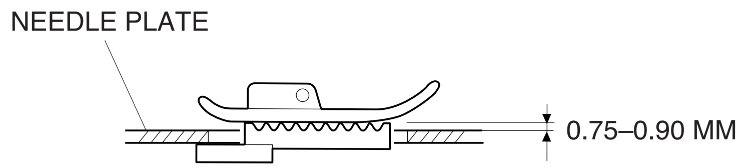
FEED DOG HEIGHT

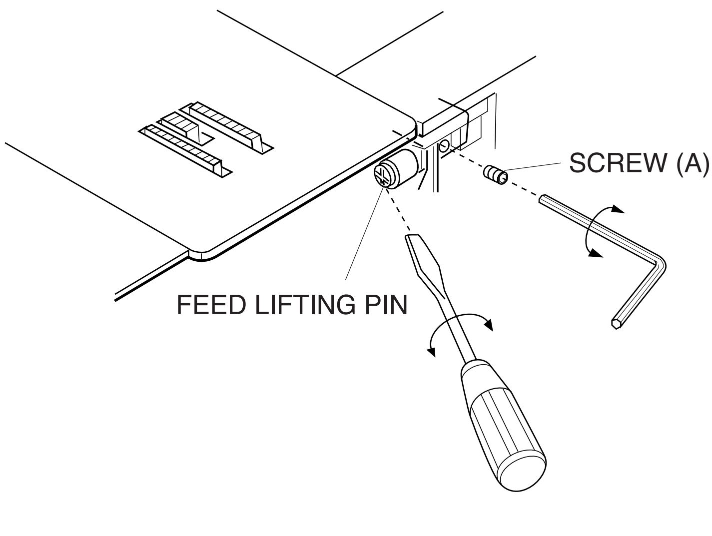
TO CHECK:

1. LOWER THE PRESSER FOOT.
2. TURN THE HANDWHEEL TOWARD YOU UNTIL THE NEEDLE BAR COMES TO THE FEED DOG ABOVE THE NEEDLE PLATE SHOULD BE 0.75–0.90 MM.
   IF IT IS NOT IN THE RANGE, ADJUST AS FOLLOWS.

ADJUSTMENT PROCEDURE:

1. OPEN THE SHUTTLE COVER.
2. LOWER THE PRESSER FOOT AND TURN THE HANDWHEEL TOWARD YOU UNTIL THE FEED DOG COMES TO ITS HIGHEST POINT.
3. LOOSEN THE SCREW (A) .
4. TURN THE FEED LIFTING PIN TO ADJUST THE HEIGHT OF FEED DOG (0.75–0.90 MM).
5. TIGHTEN THE SCREW (A).
6. TURN THE HANDWHEEL TOWARD YOU TO RECHECK THE HEIGHT OF FEED DOG.





MECHANICAL ADJUSTMENT

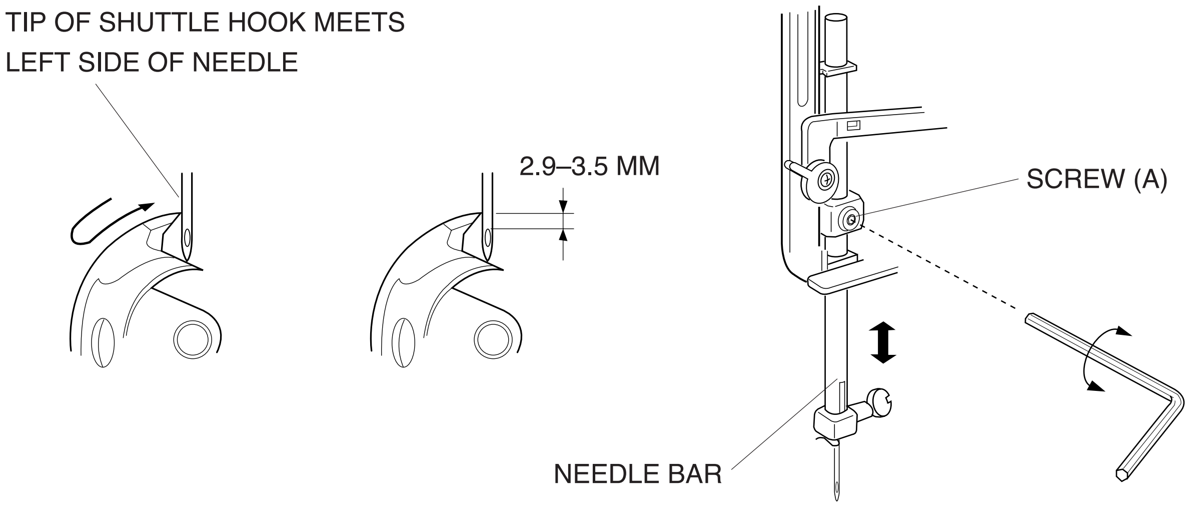
NEEDLE BAR HEIGHT

TO CHECK:

WHEN THE TIP OF SHUTTLE HOOK MEETS THE LEFT SIDE OF THE NEEDLE IN ASCENDING TRAVEL OF THE NEEDLE FROM ITS LEFT AND LOWEST POSITION, THE DISTANCE BETWEEN THE TOP OF THE NEEDLE EYE AND THE TIP OF THE SHUTTLE HOOK SHOULD BE IN THE RANGE OF 2.9-3.5 MM.

ADJUSTMENT PROCEDURE:

1. OPEN THE FACE COVER.
2. SET THE PATTERN SELECTOR DIAL AT " C¦⊃ ".
   MODEL NEXT40 PATTERN SELECT DIAL AT " C¦⊃", WIDTH SELECTOR DIAL AT " 0 ".
3. OPEN THE SHUTTLE COVER.
4. REMOVE THE SHUTTLE RACE RING.
5. TURN THE HANDWHEEL TOWARD YOU UNTIL THE TIP OF THE SHUTTLE HOOK MEETS THE LEFT SIDE OF THE NEEDLE.
6. LOOSEN THE LOWER SHAFT CRANK ARM SCREW (A).
7. ADJUST THE HEIGHT OF THE NEEDLE BAR BY MOVING THE NEEDLE BAR UPWARD OR DOWNWARD WITHOUT TURNING IT.
8. TIGHTEN THE SCREW (A).
9. ATTACH THE SHUTTLE RACE RING.



MECHANICAL ADJUSTMENT

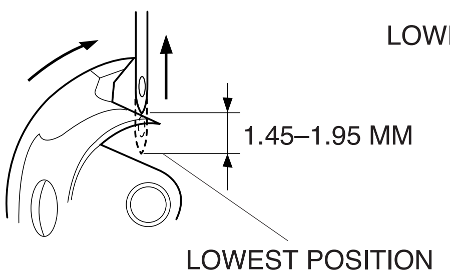
NEEDLE TIMING TO SHUTTLE

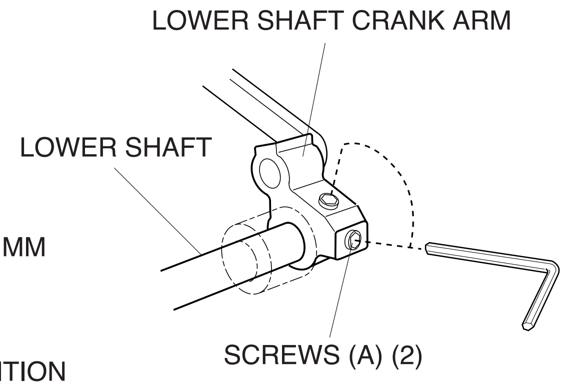
TO CHECK:

THE HEIGHT OF THE NEEDLE POINT FROM ITS LOWEST POINT OF TRAVEL SHOULD BE IN THE RANGE OF 1.45-1.95 MM WHEN THE TIP OF THE SHUTTLE HOOK JUST MEETS THE LEFT SIDE OF THE NEEDLE AT THE LEFT NEEDLE POSITION.

ADJUSTMENT PROCEDURE:

1. SET THE PATTERN SELECTOR DIAL AT “ ⊂┆⊃ ”.
   FOR MODEL NEXT 40, SELECT DIAL AT " ⊂┆⊃ ", WIDTH SELECTOR DIAL AT " 0 ".
2. REMOVE THE BASE (SEE PAGE 5).
3. OPEN THE SHUTTLE COVER.
4. REMOVE THE SHUTTLE RACE RING.
5. TURN THE HANDWHEEL TOWARD YOU UNTIL THE TIP OF THE SHUTTLE HOOK MEETS THE LEFT SIDE OF THE NEEDLE.
6. LOOSEN THE LOWER SHAFT CRANK ARM SCREWS (A).
7. WHILE HOLDING THE SHUTTLE HOOK SO IT DOESN'T TURN, TURN THE HANDWHEEL TOWARD YOU UNTIL THE NEEDLE COMES TO ITS LOWEST POSITION.
   THEN, FURTHER TURN THE HANDWHEEL TO RAISE THE NEEDLE ABOUT 1.7 MM FROM ITS LOWEST POSITION.
8. TIGHTEN THE SCREWS (A).
9. TURN THE HANDWHEEL TOWARD YOU TO CHECK IF THE HEIGHT IS IN THE RANGE OF 1.45-1.95 MM.
   IF IT IS NOT IN THIS RANGE, REPEAT THE ABOVE PROCEDURE.
10. ATTACH THE SHUTTLE RACE RING.
11. ATTACH THE BASE.





MECHANICAL ADJUSTMENT

BUTTONHOLE FEED BALANCE

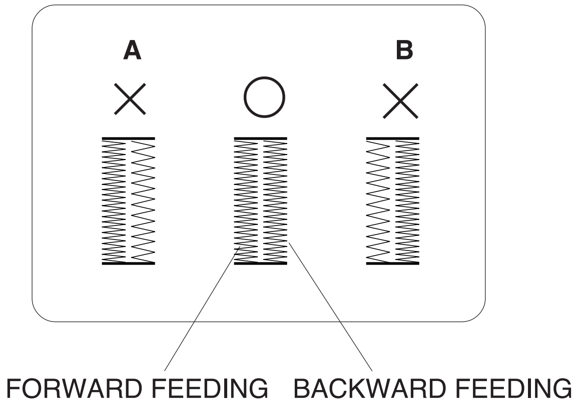
TO CHECK:

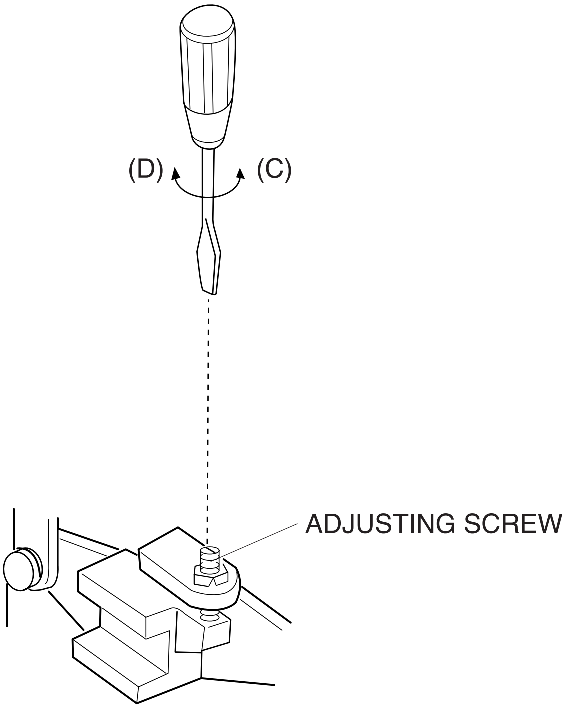
WHEN SEWING BUTTONHOLE, THE STITCHES ON EACH SIDE OF BUTTONHOLE SHOULD BE THE SAME STITCH DENSITY.

THE RANGE OF 9-12 STITCHES IN THE RIGHT SIDE ROW (BACKWARD FEEDING) AGAINST 10 STITCHES IN THE LEFT SIDE ROW (FORWARD FEEDING) IS CONSIDERED ACCEPTABLE.

ADJUSTMENT PROCEDURE:

1. CHECK THE FEED BALANCE BY SEWING BUTTONHOLES.
2. REMOVE THE CAP ON THE FRONT COVER.
3. TURN THE ADJUSTING SCREW IN THE DIRECTION OF (C) IN CASE OF (A) (RIGHT STITCHES ARE COARSE), OR IN THE DIRECTION OF (D) IN CASE OF (B) (LEFT STITCHES ARE COARSE).
4. MOUNT THE CAP.





MECHANICAL ADJUSTMENT

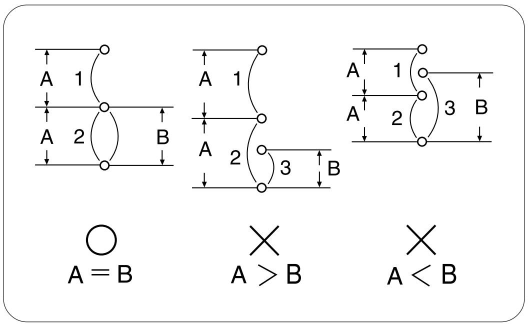
DISTORTED PATTERN (MODEL NEXT 40, 30 ONLY)

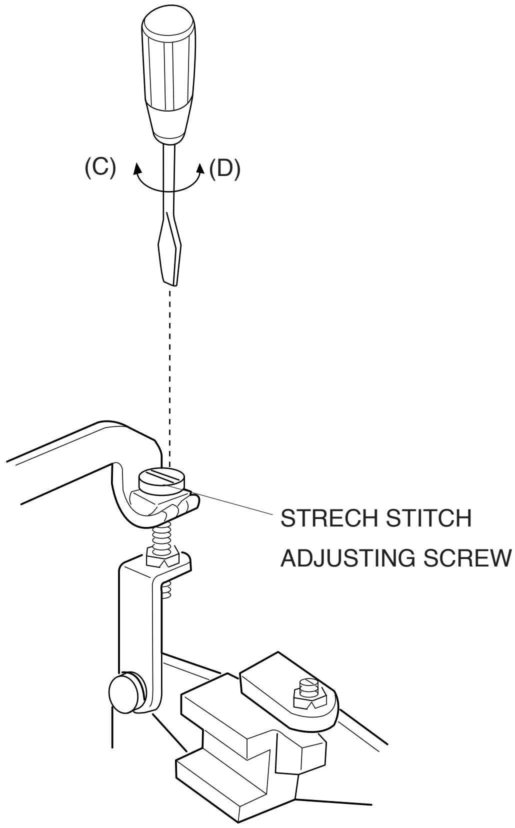
TO CHECK:

IF THE STRETCH STITCH PATTERNS ARE DISTORTED WITH SETTING THE STITCH LENGTH DIAL AT “S.S.”.
(IN CASE OF BEING A DIFFERENCE BETWEEN FORWARD FEEDING AND BACKWARD FEEDING DURING STRETCH STITCH PATTERNS), MAKE AN ADJUSTMENT AS FOLLOWS:

ADJUSTMENT PROCEDURE:

1. REMOVE THE CAP.
2. SET THE PATTERN SELECTOR DIAL AT “ ”, AND THE STITCH LENGTH DIAL AT “S.S.”.
3. TURN THE STRETCH STITCH ADJUSTING SCREW IN THE DIRECTION OF (C) WHEN A > B, OR IN THE DIRECTION OF (D) WHEN A < B.
4. MOUNT THE CAP.





MECHANICAL ADJUSTMENT

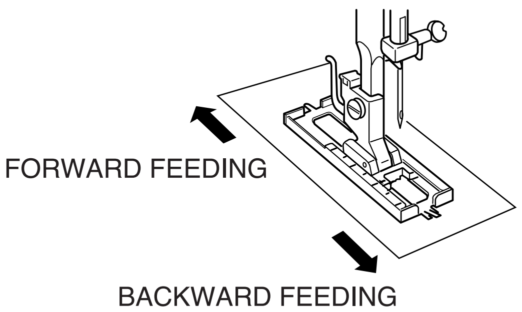
BARTACK FEED OF BUTTONHOLE

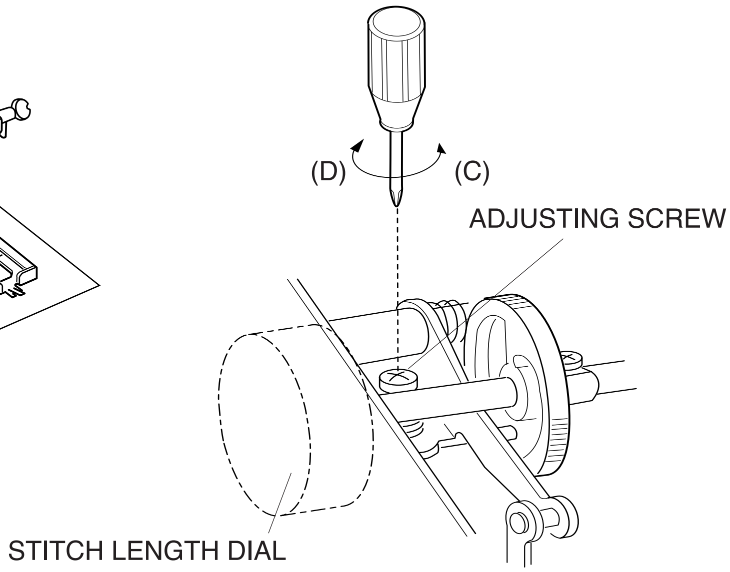
TO CHECK:

IF THE MATERIAL IS FEED FORWARD OR BACKWARD WHEN SEWING BARTACK ON BUTTONHOLE, MAKE AN ADJUSTMENT AS FOLLOWS:

ADJUSTMENT PROCEDURE:

1. SET THE PATTERN SELECTOR DIAL AT " 4 2 ", AND THE STITCH LENGTH DIAL AT "4".
2. REMOVE THE TOP COVER (SEE PAGE 4).
3. PLACE A PIECE OF PAPER UNDER THE FOOT AND TURN THE HANDWHEEL.
   IF THE PAPER IS FEED FORWARD, TURN THE ADJUSTING SCREW IN THE DIRECTION OF (C).
   IF THE PAPER IS FEED BACKWARD, TURN THE ADJUSTING SCREW IN THE DIRECTION OF (D).
4. ATTACH THE TOP COVER.





MECHANICAL ADJUSTMENT

DISENGAGEMENT OF CAM FOLLOWER

TO CHECK:

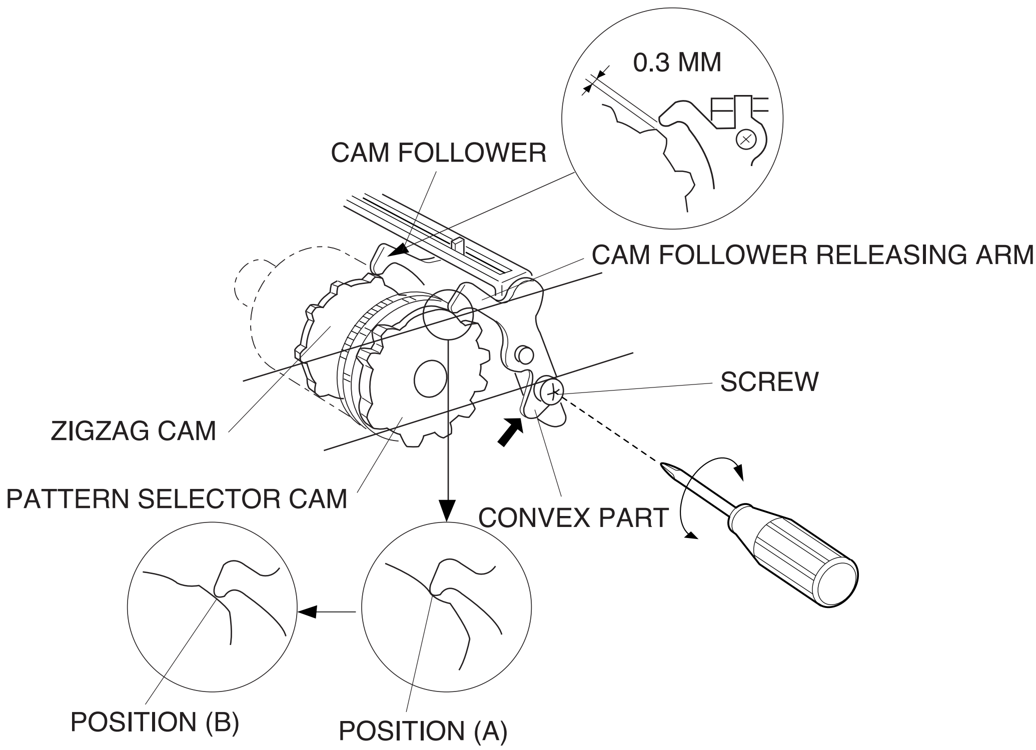
IF THE CLEARANCE BETWEEN THE CAM FOLLOWER AND THE TOP CONVEX OF THE ZIGZAG CAM IS NOT ENOUGH, THE PATTERN SELECTOR DIAL IS BLOCKED OR WILL NOT SELECT THE CORRECT PATTERN.

ADJUSTMENT PROCEDURE:

1. REMOVE THE FRONT COVER (SEE PAGE 7).
2. SET THE PATTERN SELECTOR DIAL AT PATTERN " ⊂┆⊃ ".
3. PUT THE CAM FOLLOWER TO THE ZIGZAG CAM AND PUT THE CAM FOLLOWER RELEASING ARM TO THE PATTERN SELECTOR CAM.
4. LOOSEN THE SET SCREW.
5. PUSH THE CONVEX PART OF THE CAM FOLLOWER RELEASING ARM IN THE DIRECTION OF ARROW UNTIL THE CAM FOLLOWER RELEASING ARM TOUCHES POSITION (A) OF THE PATTERN SELECTOR CAM, AND THEN, TIGHTEN THE SETSCREW.

   NOTE: AFTER THIS ADJUSTMENT, CHECK THAT THE CLEARANCE BETWEEN THE ZIGZAG CAM AND THE CAM FOLLOWER IS ABOUT 0.3 MM WHEN SETTING THE CAM FOLLOWER RELEASING ARM ONTO POSITION (B) OF PATTERN SELECTOR CAM.
6. MOUNT THE FRONT COVER.

   NOTE: CHECK THE NEEDLE MOVEMENT FOR STRAIGHT STITCH.



MECHANICAL ADJUSTMENT

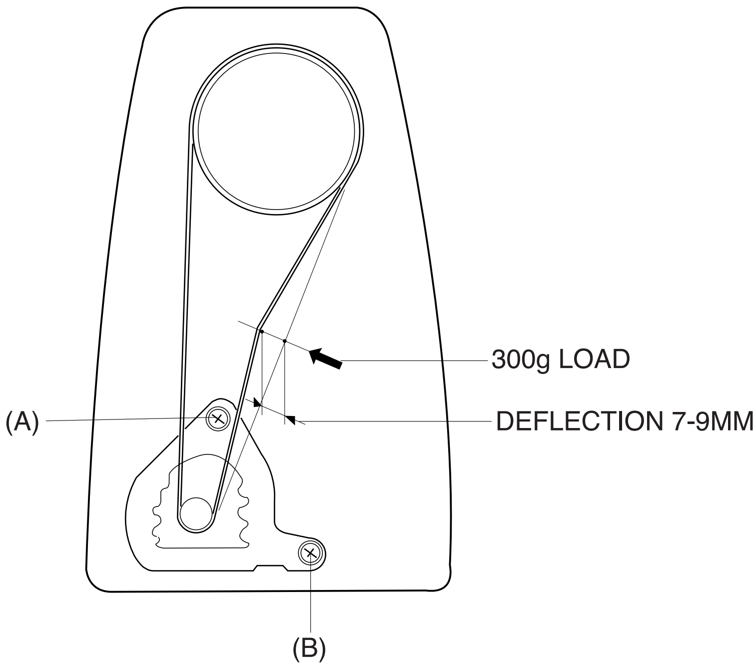
MOTOR BELT TENSION

TO CHECK:

1. IMPROPER BELT TENSION MAY CAUSE NOISE, OVERLOAD OF MOTOR, SLOW RUNNING OR MOTOR BELT JUMPING.
2. THE BELT DEFLECTION SHOULD BE 7 MM - 9 MM WHEN PRESSING THE MIDDLE OF THE MOTOR BELT WITH APPROXIMATELY 300 GRAMS OF PRESSURE.

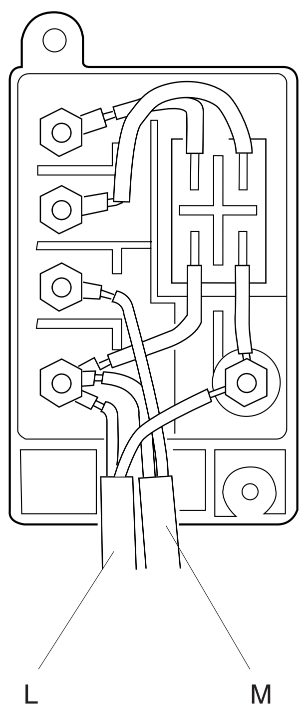
ADJUSTMENT PROCEDURE:

1. REMOVE THE FRONT AND REAR COVER (SEE PAGE 6, 7).
2. LOOSEN THE SCREWS (A) AND (B).
3. MOVE THE MOTOR UP OR DOWN TO ADJUST THE DEFLECTION ABOUT 7 MM -9 MM.
4. TIGHTEN THE SCREWS (A) AND (B).
5. ATTACH THE FRONT AND REAR COVER.



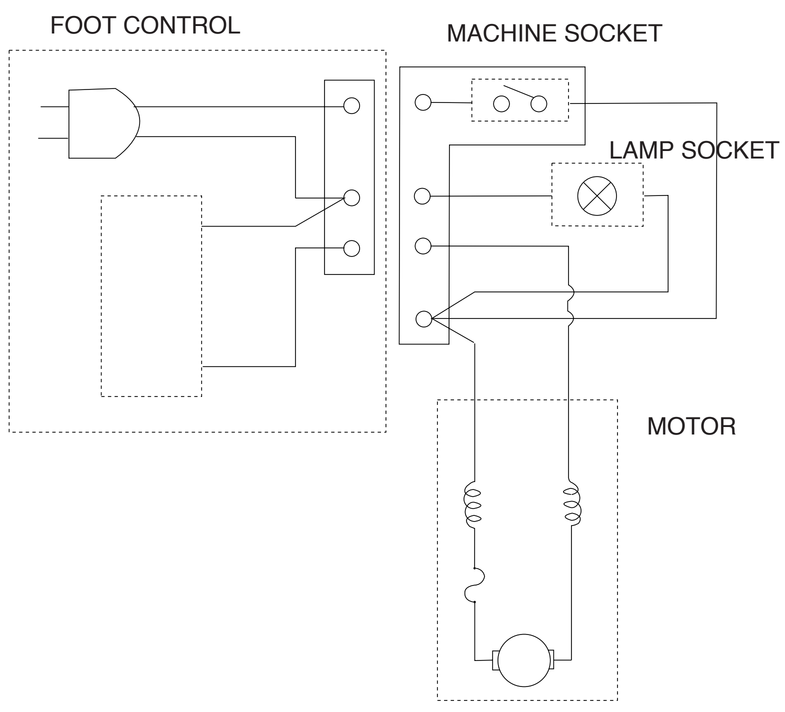
WIRING

1. WIRING FOR MACHINE SOCKET UNIT



M: MOTOR
L: LAMP

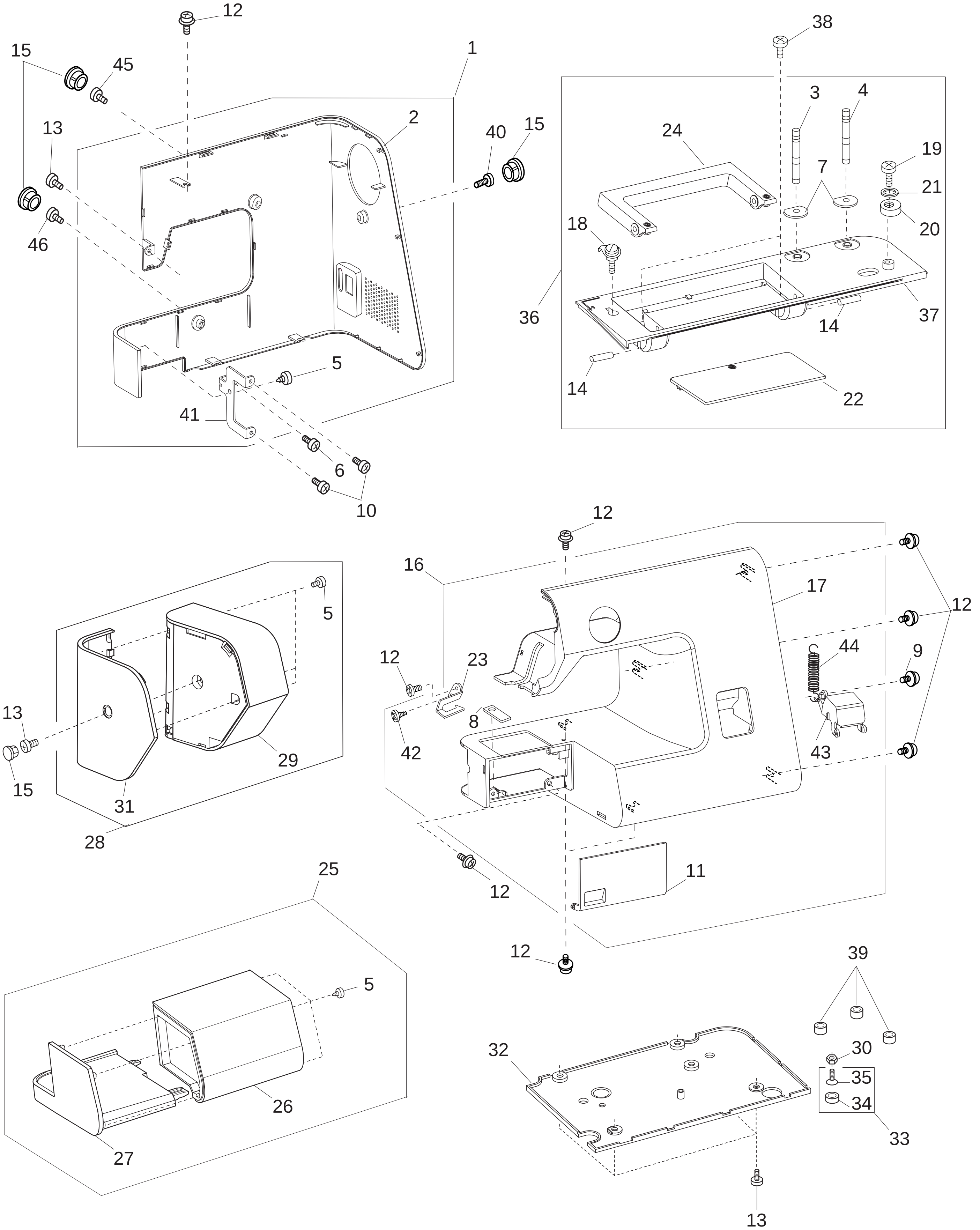
2. WIRING DIAGRAM



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PARTS LIST
NEXT 20

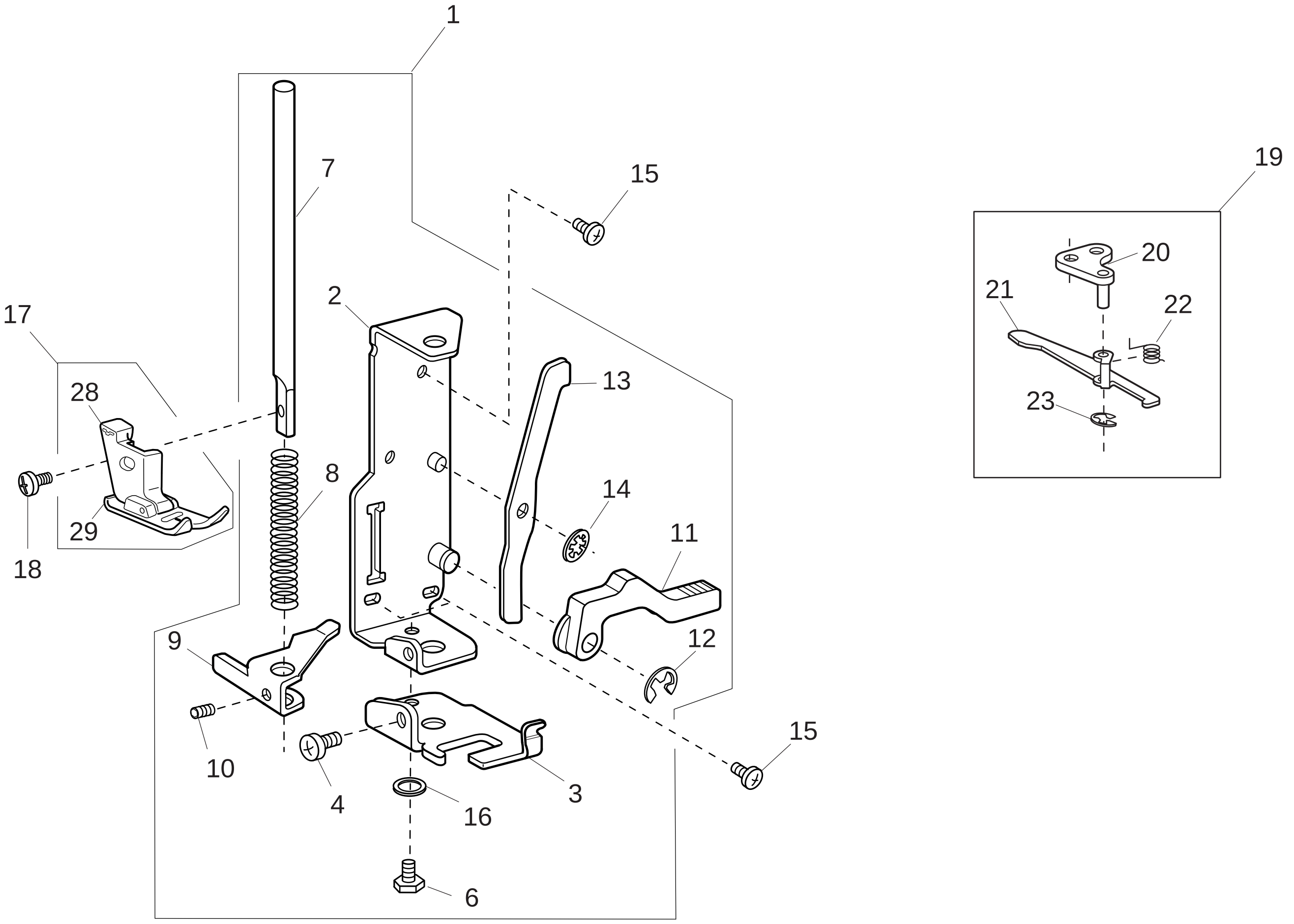
PARTS LIST

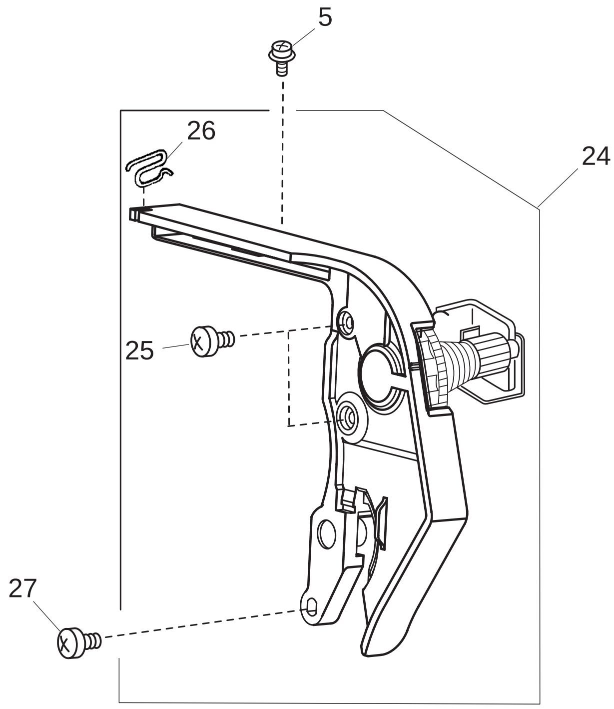

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PARTS LIST

KEY NO.	PARTS NO.	DESCRIPTION
1	310613208	Rear cover (unit)
2	310048206	Rear cover
3	652302004	Spool pin
4	652205006	Spool pin
5	000120203	Tapping screw 3x8 (B)
6	000115009	TP screw 3x8
7	735013108	Spool pin cushion
8	730006000	Spring
9	000149312	Setscrew 3x8 (B)
10	000114710	TP screw 3x6
11	310047009	Bed lid
12	000115205	TP screw 4x6
13	000081005	Setscrew 4x8
14	000028107	Spring pin 4x25
15	745033301	Cap
16	310612207	Front cover (unit)
17	310044213	Front cover
18	730501011	Thread guide plate (unit)
19	000160814	Setscrew 4x18
20	735016307	Bobbin winder stopper
21	000071013	Washer
22	310052306	Stitch guide
23	745031000	Thread guard plate
24	310053008	Carrying handle
25	310616005	Extension plate (unit)
26	310056001	Extension plate 1
27	310057208	Extension plate 2
28	310615200	Face cover (unit)
29	310054009	Face cover
30	000061319	Nut
31	310055206	Face cover plaque
32	310050005	Bottom cover
33	735616200	Rubber base (unit)
34	735002001	Rubber base
35	000097901	Flat screw 5x18
36	310614209	Top cover (unit)
37	310051006	Top cover
38	000103510	Setscrew 4x10
39	739064003	Bed rubber base
40	000080912	Setscrew 4x25
41	310049001	Cover fixing plate
42	000107307	Tapping screw 3x8 (B)
43	310045203	R button
44	310046008	R button spring
45	000198316	Setscrew 4x10
46	810220003	Setscrew

PARTS LIST

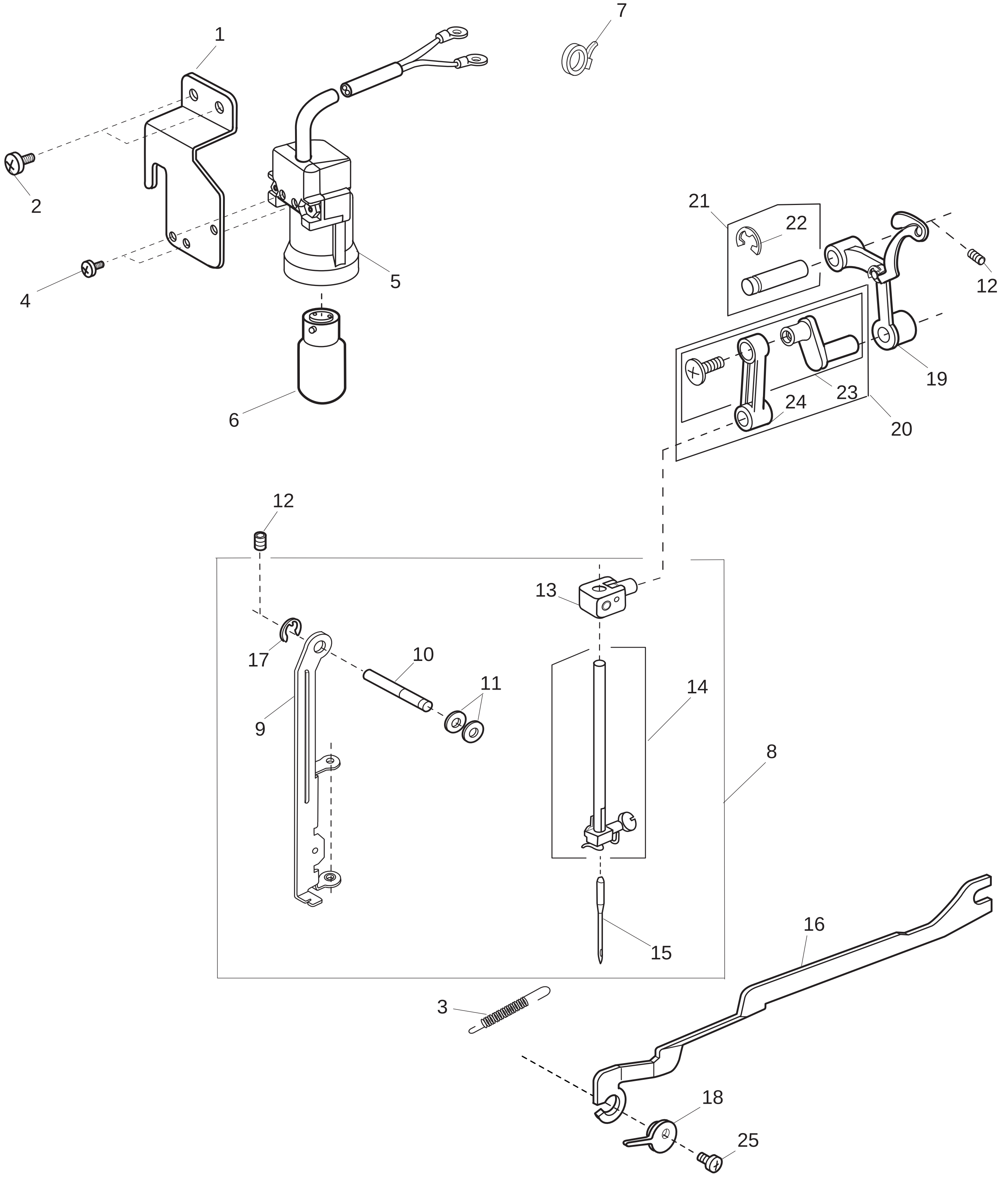

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PARTS LIST

KEY NO.	PARTS NO.	DESCRIPTION
1	310603009	Presser bar base plate (unit)
2	735221008	Presser bar base plate
3	310009009	Needle position set plate
4	000101404	Setscrew 4x6
5	000115205	TP screw 4x6
6	000138307	Bolt 4x8
7	735026001	Presser bar
8	735027002	Presser bar spring
9	735028003	Presser bar bracket
10	000111500	Hexagonal socket screw 4x8
11	735029004	Presser foot lifter
12	000001609	Snap ring E-5
13	735030008	Tension release lever
14	000013903	Snap ring CS-5
15	000081005	Setscrew 4x8
16	000070506	Washer
17	310621003	Presser foot (unit)
18	660106001	Thumb screw
19	739605002	Tension release arm (unit)
20	739017001	Tension release arm base
21	739018002	Tension release arm
22	739019003	Tension release spring
23	000002105	Snap ring E-3
24	310504205	Tension regulator (unit)
25	000103808	Setscrew 3x5
26	639004002	Thread guide
27	000101703	Setscrew 4x12
28	310801009	Foot holder (unit)
29	301505002	Zigzag foot (unit)

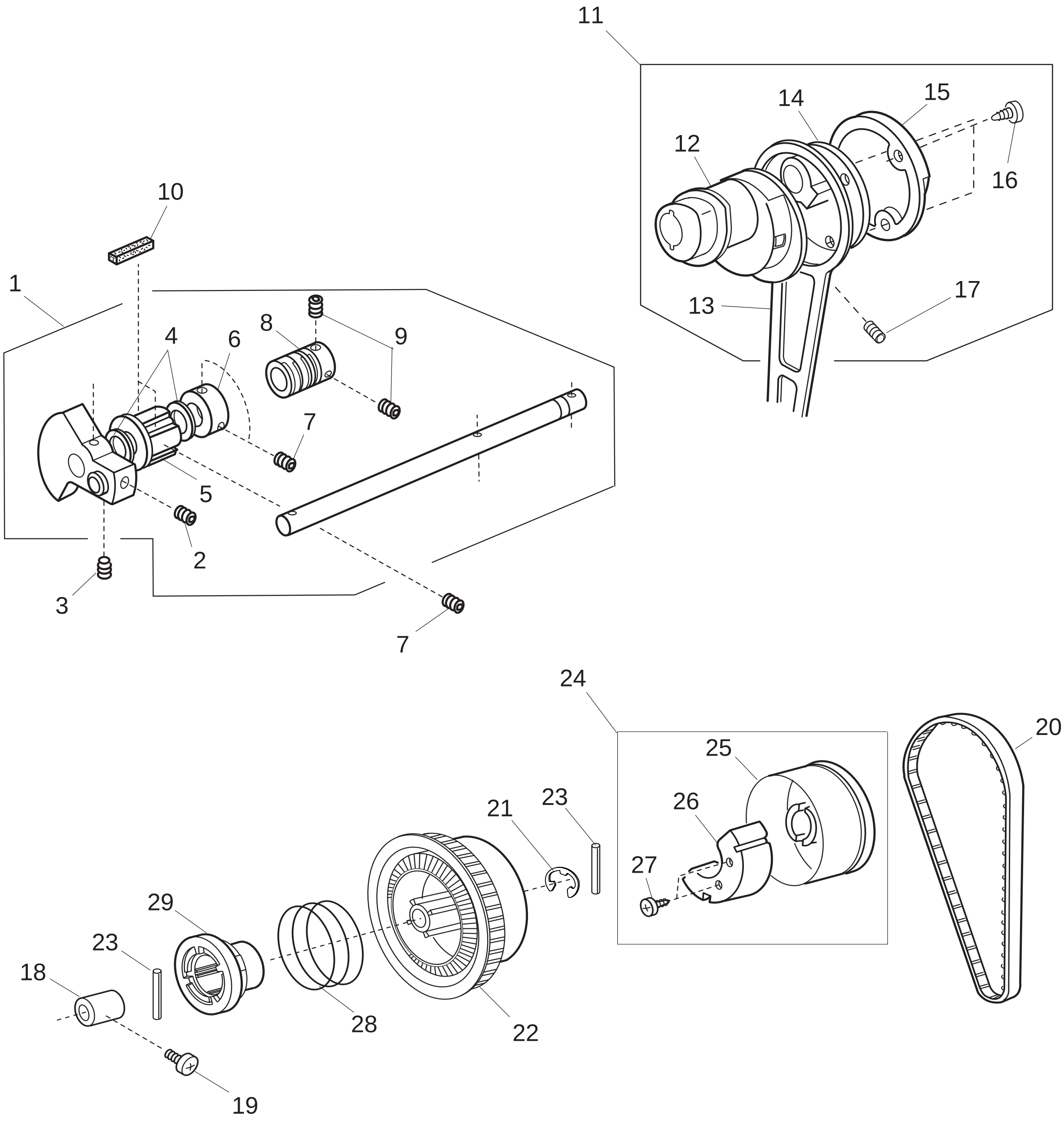
PARTS LIST



PARTS LIST

KEY NO.	PARTS NO.	DESCRIPTION
1	310065003	Face plate set plate
2	000081005	Setscrew 4x8
3	639017008	Needle bar supporter spring
4	000120203	Setscrew 3x8
5	655681009	Lamp socket (unit)
6	000009102	Lamp 240V, 15W
7	000053709	Cord tie band
8	310605001	Needle bar supporter (unit)
9	310012005	Needle bar supporter
10	310013006	Needle bar supporter pin
11	000013800	Snap ring CS-6
12	000111304	Hexagonal socket screw 5x5
13	310503008	Needle bar connecting stud (unit)
14	310606002	Needle bar (unit)
15	102408089	Needle HA 1-14
16	735119002	Zigzag rod
17	000001609	Snap ring E-5
18	310041003	Eccentricity plate
19	625506109	Thread take-up lever (unit)
20	743664208	Needle bar crank (unit)
21	731511006	Thread take-up pin (unit)
22	000002806	Snap ring E-6
23	735504008	Needle bar crank pin (unit)
24	680032100	Needle bar crank rod
25	000078319	Setscrew 3x6

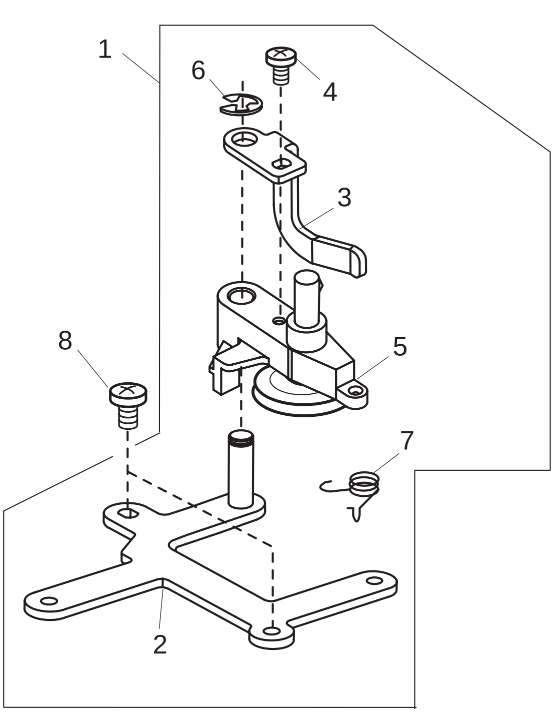
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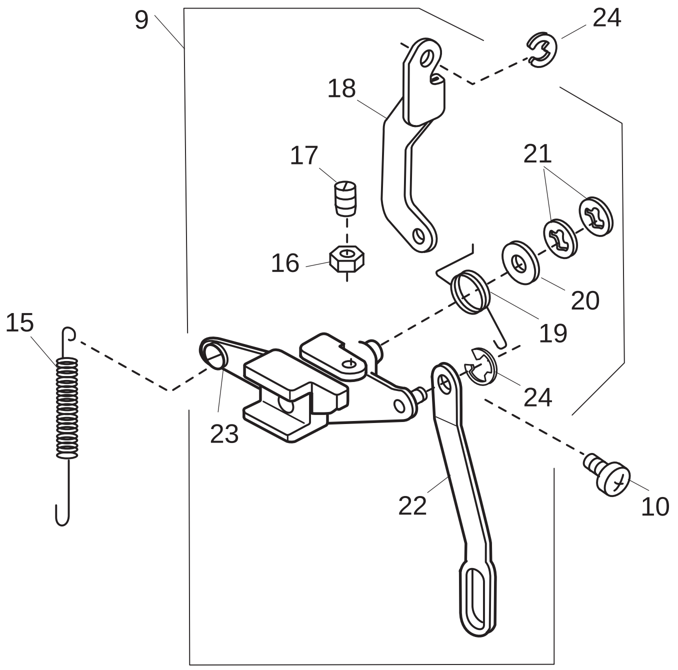

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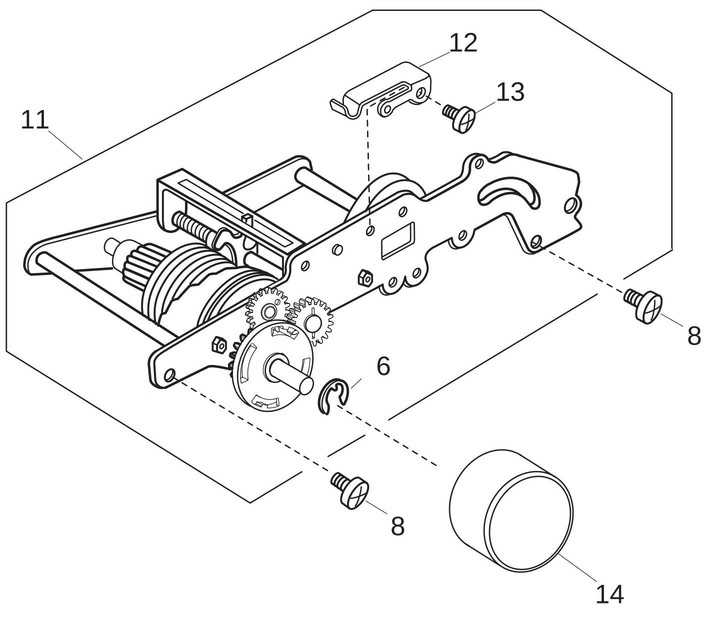
PARTS LIST

KEY NO.	PARTS NO.	DESCRIPTION
1	310602008	Upper shaft (unit)
2	102073003	Setscrew
3	761052007	Setscrew
4	000036717	Thrust washer
5	732025001	Upper shaft front bushing
6	639095000	Ring
7	000111304	Hexagonal socket screw 5x5
8	749011109	Worm
9	000111201	Hexagonal socket screw 4x4
10	731312005	Felt
11	304609006	Crank rod (unit)
12	304042005	Feed cam
13	743011008	Crank rod
14	304044007	Crank cam
15	304043006	Crank cam plate
16	000161309	Tapping screw 3x12 (B)
17	000110107	Hexagonal socket screw 5x5
18	732003003	Upper shaft rear bushing
19	000172602	Setscrew 5x8
20	650166008	Motor timing belt
21	000030205	Snap ring E-8
22	303025009	Belt wheel
23	000024206	Spring pin 3x30
24	310619204	Handwheel (unit)
25	310007203	Handwheel
26	743030003	Balance weight
27	000121400	Tapping screw 3x14 (B)
28	502065004	Clutch spring
29	502064003	Clutch ring

PARTS LIST



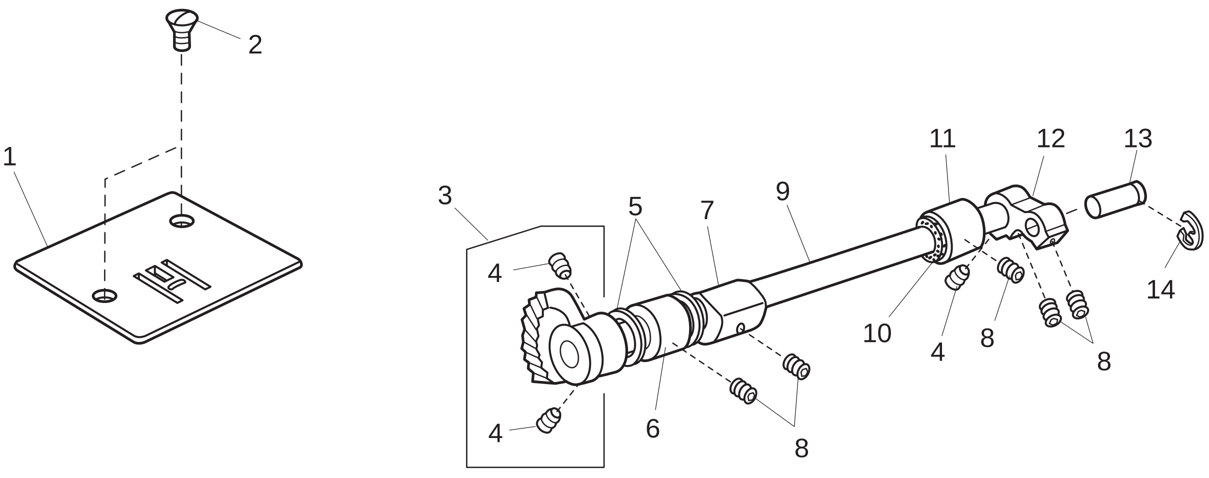


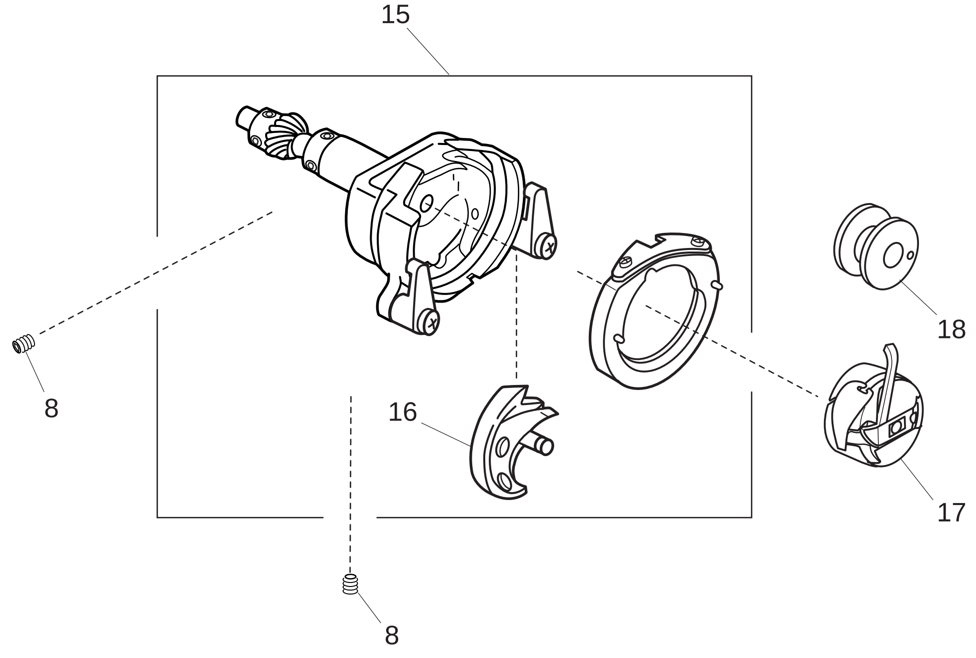


PARTS LIST

KEY NO.	PARTS NO.	DESCRIPTION
1	310601007	Bobbin winder support plate (unit)
2	310001001	Bobbin winder support plate
3	310003003	Clutch opener plate
4	000120203	Setscrew 3x8 (B)
5	310501006	Bobbin winder arm (unit)
6	000001609	Snap ring E-5
7	505071002	Bobbin winder arm spring
8	000081005	Setscrew 4x8
9	310618007	Feed regulator (unit)
10	000172602	Setscrew 5x8
11	310611000	Zigzag mechanism (unit)
12	735145007	Index spring
13	000103808	Setscrew 3x5
14	310043120	Dial
15	740125007	Feed regulator spring
16	000160102	Adjustable lock nut 4
17	648010009	Setscrew
18	740096008	Feed regulating rod
19	735077007	Feed regulating body spring
20	735073003	Plain washer
21	000013800	Snap ring CS-6
22	310058003	Reverse link
23	648012001	Hinge screw
24	000002105	Snap ring E-3

PARTS LIST

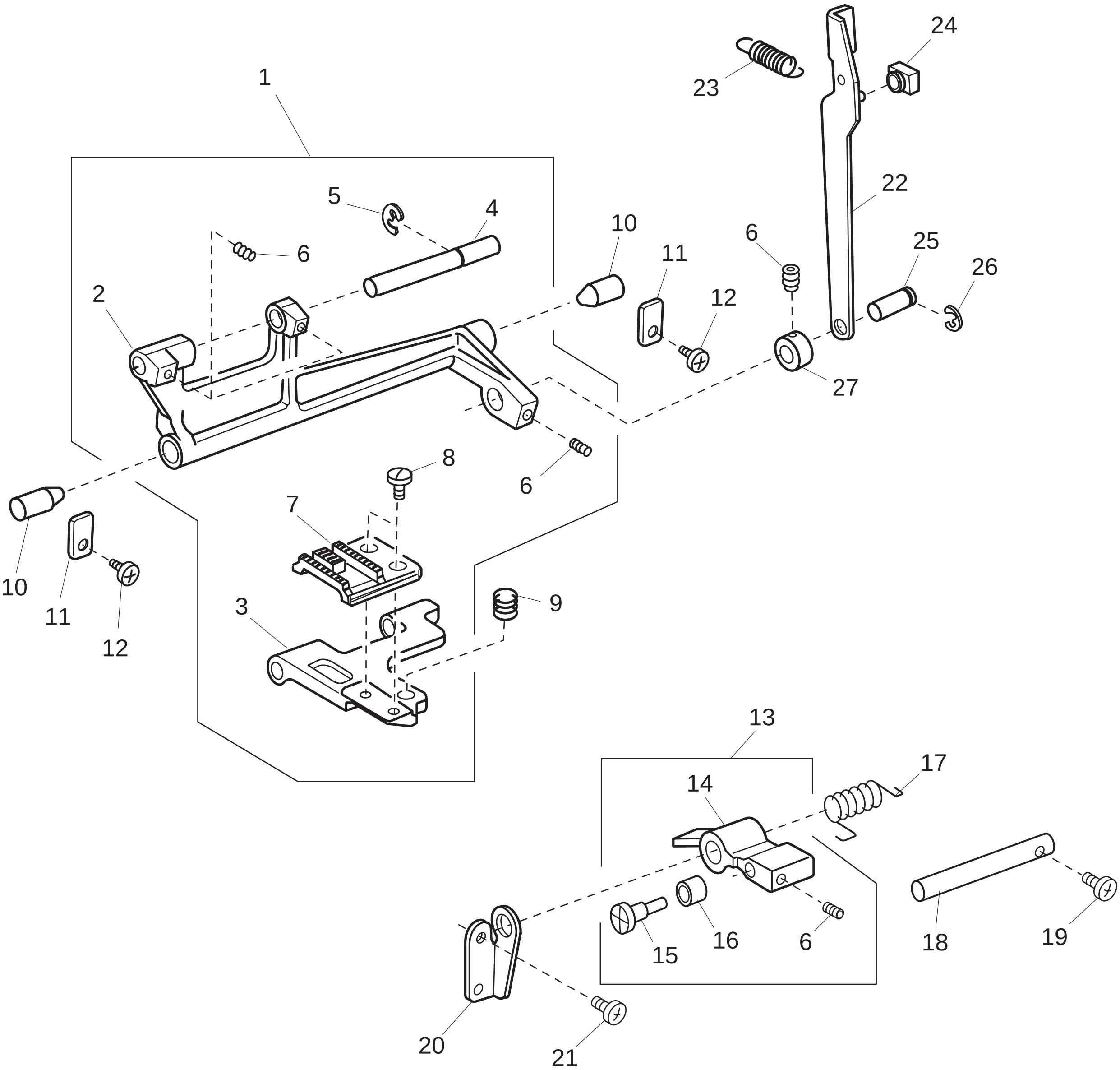




PARTS LIST

KEY NO.	PARTS NO.	DESCRIPTION
1	744004001	Needle plate
2	681009101	Setscrew
3	735950003	Lower shaft gear (unit)
4	000110107	Hexagonal socket screw 5x5WP
5	000036201	Washer 8-0.5
6	735233003	Bushing
7	735061101	Feed lifting cam
8	000111304	Hexagonal socket screw 5x5
9	735236006	Lower shaft
10	822070003	Felt
11	735234004	Bushing
12	639036003	Lower shaft crank arm
13	639037004	Pin
14	000001609	Snap ring E-5
15	735610101	Shuttle race body (unit)
16	532096007	Shuttle hook
17	647515006	Bobbin case (unit)
18	102261000	Bobbin

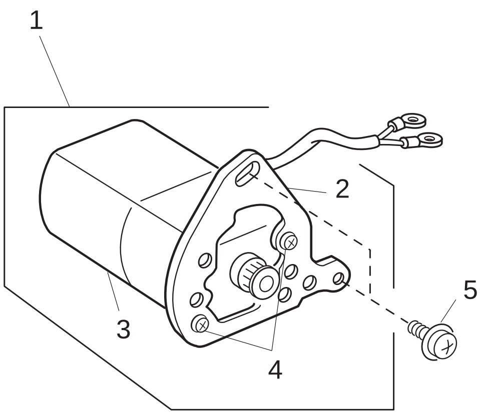
PARTS LIST

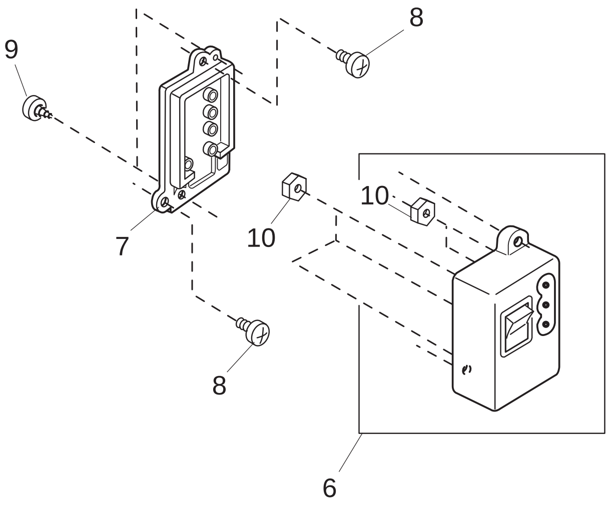


PARTS LIST

KEY NO.	PARTS NO.	DESCRIPTION
1	735612000	Feed rock shaft (unit)
2	735078008	Feed rock shaft
3	735079009	Feed bar
4	735080003	Feed bar shaft
5	000002507	Snap ring E-4
6	000111201	Hexagonal socket screw 4x4
7	735081004	Feed dog
8	735082005	Setscrew
9	735083006	Feed bar spring
10	735084007	Feed rock shaft center
11	735085008	Feed rock shaft center plate
12	000101404	Setscrew 4x6
13	301608006	Feed lifting arm (unit)
14	301027005	Feed lifting arm
15	735087000	Feed lifting pin
16	735088001	Feed lifting roller
17	735089002	Feed lifting spring
18	735090006	Feed lifting shaft
19	000101703	Setscrew 4x12
20	739022009	Feed lifting shaft holder
21	000081119	Setscrew 4x6
22	743012009	Feed rod
23	743013000	Feed rod spring
24	102141003	Feed regulator slide block
25	735071104	Feed rock shaft connecting pin
26	000002806	Snap ring E–6
27	735276008	Ring

PARTS LIST

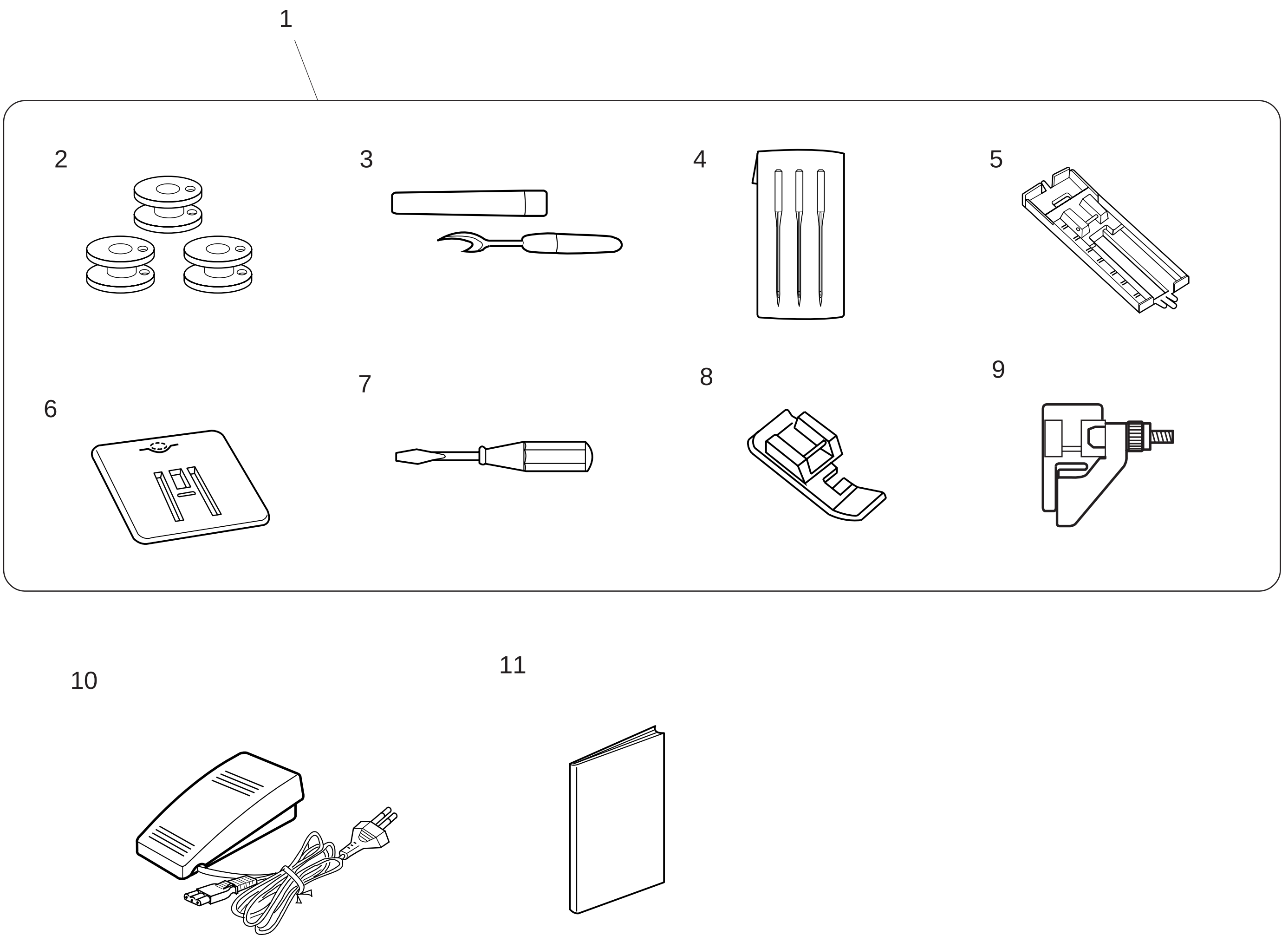




PARTS LIST

KEY NO.	PARTS NO.	DESCRIPTION
1	743611303	Motor assy
2	743025005	Motor bracket
3	024070407	Motor
4	000001960	Setscrew
5	000201209	Setscrew 5x12
6	739503308	Machine socket unit
7	739037007	Machine socket cover
8	000103509	Setscrew 4x10
9	000107802	Setscrew 3x10 (B)
10	000060802	Nut

PARTS LIST



PARTS LIST

KEY NO.	PARTS NO.	DESCRIPTION
1	310870009	Accessory set
2	102261000	Bobbin
3	647808009	Seam ripper
4	639804000	Needle set
5	611413002	Slide buttonhole foot
6	735801008	Darning plate
7	647803004	Screwdriver (small)
8	611406002	Zipper foot
9	611411000	Blind foot
10	042970402	Foot control
11	310800123	Instruction book (Sp/Po/It/Fr/Gr)